Document D0026

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

FEB 02 2004

REPLY TO THE ATTENTION OF

B-19J

Mr. Gary Hartman
DOE-ORO Cultural Resources Management Coordinator
U.S. Department of Energy- Oak Ridge Operations
P.O. Box 2001
Oak Ridge, TN 37831

Subject: Comments on the Draft Environmental Impact Statement for the Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility.

Dear Mr. Hartman:

The U.S. Environmental Protection Agency Region 5 (U.S. EPA) has reviewed the Department of Energy Draft Environmental Impact Statement (DEIS) for the Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility at the Portsmouth, Ohio site. Our review is pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act. The CEQ's number for this DEIS is 030540.

The proposed action is to convert the Department of Energy's Depleted Uranium Hexafluoride (DUF_6) inventory at the Portsmouth site to Triuranium Octaoxide (U_3O_8). The EIS assessed the potential environmental impacts from the following construction activities: 1) Construction, operation, maintenance, and decontamination and decommissioning (D&D) of the proposed conversion facility; 2) Transportation of uranium conversion products and waste materials to a disposal facility; 3) Transportation and sale of the hydrogen fluoride (HF) conversion co-product; and 4) Neutralization of HF and Calcium Fluoride (CaF_2) and its sale or disposal in the event that the HF co-product is not sold.

Potential environmental impacts were assessed by examining all of the activities required to implement each alternative. Potential long-term impacts from cylinder breaches occurring at Portsmouth and East Tennessee Technology Park (ETTP) were also estimated. For each alternative, potential impacts to workers, members of the general public, and the environment were estimated for both normal operations and potential accidents.

Because of the chemical and radioactive nature of the materials processed and produced and the fact that the conversion facility would be built on a previously disturbed industrialized site, the potential impact to the health of workers and the public is one of the areas of primary

concern.

The No Action alternative is the storage of DUF_6 cylinders indefinitely in the yards at the Portsmouth and ETTP sites with the continued cylinder surveillance and maintenance activity. Impacts were evaluated through the year 2039 and potential long-term (beyond 2039) impacts were also evaluated.

Three action alternatives, besides the No Action Alternative, were evaluated. The only difference in alternatives was the location of the plant within the Portsmouth site.

Alternative A, the preferred alternative, has three existing structures that were formerly used to store chemicals. The site has already been environmentally disturbed; therefore no new impacts will be likely to occur.

Alternative location B was considered, but a gas centrifuge plant is now going to be constructed at the site, so that location is not a viable alternative anymore.

Alternative location C consists of a gently rolling grass field and would cause more environmental disturbances than the preferred alternative.

Our comments about the project as described in the DEIS include:

- The three Administrative Consent Orders governing environmental restoration at the Porthsmouth plants should be discussed in the FEIS;

- The cumulative impacts of constructing and operating the newly announced centrifuge facility for uranium enrichment should be discussed in the context of the DUF_6 facility;

- The FEIS should describe DOE's confidence that adequate off-site disposal capacity will exist to accept wastes from the DUF_6 process;

- Transportation of wastes should be more thoroughly discussed;

- The FEIS should be explicit that the Radionuclide National Emissions Standards for Hazardous Air Pollutants (NESHAPS) for DOE facilities will apply to the DUF_6 facility;

- Calculations provided and models cited should use consistent units.

U.S. EPA rates "A," the preferred alternative, **EC-2, Environmental Concerns - Insufficient Information.** Please see the enclosure for a description of U.S. EPA's ratings. An EC-2 rating indicates that our review has identified potential environmental impacts of the proposal that should be avoided to fully protect the environment, and that more information should be provided to fully assess the impacts of the proposal. Our detailed comments are included in an additional enclosure. D0026-8

We appreciate the opportunity to review the DEIS. Please send only three copies of the final EIS to this office at the same time it is officially filed with our Washington, D.C. Office. If

you have any questions, please call Joana Bezerra at (312) 886-6004, or send email to bezerra.joana@epa.gov.

Sincerely,

Kenneth A. Westlake
Chief, Environmental Planning and Evaluation Branch
Office of Strategic Environmental Analysis

Enclosures (2): Summary of Rating Definitions and Followup Action
Detailed Comments

SUMMARY OF RATING DEFINITIONS AND FOLLOW UP ACTION*

Environmental Impact of the Action

LO-Lack of Objections
The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC-Environmental Concerns
The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impacts. EPA would like to work with the lead agency to reduce these impacts.

EO-Environmental Objections
The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU-Environmentally Unsatisfactory
The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS sate, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1-Adequate
The EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collecting is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2-Insufficient Information
The draft EIS does not contain sufficient information for the EPA to fully assess the environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3-Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

From EPA Manual 1640 Policy and Procedures for the Review of the Federal Actions Impacting the Environment

USEPA Comments on the Depleted Uranium Hexafluoride Conversion Facility DEIS in Portsmouth, Ohio. **February 2, , 2004**

The Final EIS should indicate that environmental restoration activities at the Portsmouth Gaseous Diffusion Plants (PORTs) are governed by three Administrative Consent Orders: 1) the 1989 Ohio EPA Consent Decree; 2) the 1997 Three Party Administrative Order on Consent (U.S. EPA, Ohio EPA and DOE); and 3) the 1999 Ohio EPA Administrative Order for Integration. A summary and overview of these and other legal orders relevant to PORTs should be provided. D0026-1

On January 12, 2004, USEC, Inc., announced that a new American Centrifuge uranium enrichment plant (ACEP) will be constructed and operated at Portsmouth. The summary section of the Final EIS should address the potential cumulative effects of that new plant will have on the overall environmental impacts of the DUF_6 facility. D0026-2

If the conversion facility will have a role beyond processing the current inventory of DUF_6 and non-DUF_6 cylinders, the Final EIS should address the conversion facility's potentially longer operation period and processing capacity. The EIS should also address the potential for facility upgrades that would accommodate increased processing capacity should the need arise. The concern is whether the EIS is comprehensive enough to accommodate future upgrades to the conversion facility, without having to revisit the NEPA process again. D0026-3

Disposal facilities each have unique waste acceptance criteria (WAC) that dictate what can be accepted for disposal. For what is currently known about the two representative disposal facilities (Envirocare and NTS - Nevada Test Site), and the anticipated profiles of the conversion products (depleted U_3O_8, CaF_2, emptied cylinders), the Final EIS should describe the level to which DOE is confident that the representative disposal facilities have both the WAC limits and the physical capacity to accept what will be an enormous quantity of conversion product waste. D0026-4

The Draft EIS suggested that 2,200 railcar shipments could be sent to NTS. Rail access to NTS and its existing disposal areas currently does not exist. The Final EIS should offer additional discussion of the transportation process and related impacts. D0026-5

When regulatory compliance assurances are provided throughout this document, the Radionuclide National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Radionuclide Emissions for United States Department of Energy (USDOE) Owned or Operated Facilities, found at 40 CFR 61, Subpart H, are not always adequately identified. This outside oversight and compliance demonstration helps to provide the public with the knowledge they are adequately protected under this regulation as long as compliance can be clearly demonstrated. D0026-6

Measurement of parameters in calculations and models cited must be in consistent units to avoid confusion and to better assess the conservatism and adequacy of the methodologies used for evaluating the relative risks for this project. D0026-7

FROM :USEC TO : 630 252 4611 2004,02-02 15:38 #391 P.02/05

Document D0027

USEC
A Global Energy Company

February 2, 2004

Gary S. Hartman
DOE-ORO Cultural Resources Management Coordinator
U.S. Department of Energy - Oak Ridge Operations
P.O. Box 2001
Oak Ridge, TN 37831

RE: DEIS for Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility at the Portsmouth, Ohio Site (DOE/EIS - 0360)

Dear Mr. Hartman:

Attached please find specific comments on the referenced DEIS.

As a general comment, United States Enrichment Corporation (USEC) and the DOE-PORTS office have worked together to address issues at the Portsmouth Gaseous Diffusion Plant (PORTS) for more than 10 years. They coordinate many of their activities to assure appropriate site reporting and response to the various environmental authorities. This close coordination has benefited both DOE and USEC and has assured compliance with applicable environmental requirements. We would be glad to arrange for a meeting at PORTS to discuss the impacts the UDS Conversion Facility may have upon other activities at PORTS and to include those facilities in our coordination of activities affecting the site. D0027-1

Thank you for the opportunity to make these comments.

Sincerely,

T. Michael Taimi
Director, Environmental Affairs

Attachment

USEC Inc.
6903 Rockledge Drive, Bethesda, MD 20817-1818
Telephone 301-564-3200 Fax 301-564-3201 http://www.usec.com

FROM :USEC TO : 630 252 4611 2004,02-02 15:39 #391 P.04/05

USEC
A Global Energy Company

February 2, 2004

Gary S. Hartman
DOE-ORO Cultural Resources Management Coordinator
U.S. Department of Energy - Oak Ridge Operations
P.O. Box 2001
Oak Ridge, TN 37831

RE: DEIS for Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility at the Paducah, Kentucky Site (DOE/EIS - 0359)

Dear Mr. Hartman:

Attached please find specific comments on the referenced DEIS.

As a general comment, United States Enrichment Corporation (USEC) and the DOE-GDP office have worked together to address issues at the Paducah Gaseous Diffusion Plant (PGDP) for more than 10 years. They coordinate many of their activities to assure appropriate site reporting and response to the various environmental authorities. This close coordination has benefited both DOE and USEC and has assured compliance with applicable environmental requirements. We would be glad to arrange for a meeting at PGDP to discuss the impacts the UDS Conversion Facility may have upon other activities at PGDP and to include those facilities in our coordination of activities affecting the site. D0027-1 (cont.)

Thank you for the opportunity to make these comments.

Sincerely,

T. Michael Taimi
Director, Environmental Affairs

Attachment

USEC Inc.
6903 Rockledge Drive, Bethesda, MD 20817-1818
Telephone 301-564-3200 Fax 301-564-3201 http://www.usec.com

Draft Environmental Impact Statement comments for *Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility* at the Portsmouth, Ohio, Site

1. Section 2.5 - USEC concurs with the DOE's preferred location (Location A) to construct and operate the proposed DUF6 conversion facility. D0027-2
2. General Comment - Reference to any USEC Advanced Technology siting decisions for the American Centrifuge need to reflect that the siting decision has been made and that PORTS has been selected. D0027-3
3. Section 3.1.3.2 - The Title V air permit for USEC operations has been issued and was effective August 21, 2003. D0027-4
4. Table 6.1 States: "The DUF6 conversion facility would not discharge industrial process wastewater. Therefore, an NPDES Permit for Process Water Discharge would not be required." It is possible that a facility with a wet scrubber, water-cooled heat exchangers, and water spray cooling may have a process wastewater stream. Sanitary water use from daily activity and shower rooms will require discharge through a NPDES permitted treatment process such as the onsite USEC operated process. It is likely that UDS will be required to obtain a NPDES permit that will require an internal monitored outfall before discharging into the USEC X-6619 permitted sewage treatment plant. D0027-5
5. Section 3.1.6.2 states "greater biological diversity exists upstream of the plant discharges than downstream." This is not consistent with the following Ohio EPA reports that state: "aquatic habitat quality in Little Beaver Creek declines upstream of PORTS discharges due to low and/or intermittent water flow." D0027-6
    - *Biological, Fish Tissue and Sediment Quality in Little Beaver Creek, Big Beaver Creek, Big Run Creek and West Ditch, Piketon Ohio.* May 24, 1993, OEPA Technical Report EAS/1993-5-2
    - *Biological and Water Quality Study of Little Beaver Creek and Big Beaver Creek – 1997*, June 4, 1998, OEPA Technical Report MAS/1998-5-1
6. General Comment: There is no specific reference as to how waste material with radionuclides other then uranium will be addressed. In particular, heels material is likely to contain TRU, and long-lived thorium isotopes (^{228}Th, ^{230}Th, ^{232}Th). The EIS needs to address containment and contamination control of this material. D0027-7
7. General Comment: There is no specific reference to how Radionuclide NESHAPs will be implemented. UDS needs to consider how they will quantify their radionuclide emissions and how they will coordinate their annual reporting with other site residents. Currently the Radionuclide NESHAPs dose limit applies to the site as a whole. If UDS pursues a "go it alone" approach, then USEC and DOE will be UDS's public and UDS will be USEC and DOE's public for whom dose needs to be determined. D0027-8
8. Table 6.1 States: "UDS will prepare and submit an Annual Hazardous Chemical Inventory Report each year, if hazardous chemicals have been stored at the DUF6 conversion facility site in amounts that exceed threshold quantities during the preceding year." Chemical threshold quantities are derived from the aggregate of all Reservation residents. Currently DOE provides USEC a monthly chemical inventory list of materials managed by various DOE Sub-Contractors resident on site. USEC compiles the lists monthly to determine if a threshold quantity has been exceeded. USEC then files the Annual Hazardous Chemical Inventory Report for the site. D0027-9

DOE/EIS 359 Comments

Section	Comment/Recommendation	
General Comments	HF production is discussed in several areas but emissions are not addressed. USEC's current air pollution permit contains limits on HF emissions that utilize the full allocation for the site. The EIS should address how HF emissions are to be treated or include a zero emission plant design.	D0027-10
	There is no specific reference as to how waste material that includes radionuclides and long-lived thorium isotopes other than uranium will by handled. USEC experience indicates transuranics and technetium may remain in the heel material after transfer of UF_6 from the cylinder, especially in cylinders that were previously used for handling of reactor returns. The EIS should address waste material containing transuranics and technetium.	D0027-11
	There is no specific reference to how radionuclide NESHAPs will be implemented. Currently radionuclide NESHAPs dose limit applies to the site as a whole. If UDS pursues a stand-alone approach, then USEC and DOE will be UDS's "public" and UDS will be USEC's and DOE's "public" when calculating and reporting dose to the public. The EIS should address the method of compliance with 40 CFR 61 regulations.	D0027-12
	Reference to any USEC Advanced Technology siting decisions for the American Centrifuge should reflect that the siting decision has been made and that the Portsmouth Gaseous Diffusion Plant site has been selected.	
S.5.4, Table 5.6, 3.1.3.3	The EIS indicates emissions of particulate matter from construction activities may exceed ambient air quality standards. Control measures will be applied to minimize the particulate emissions. The EIS should address any air or water quality impacts from applying the particulate matter control measures.	D0027-13
Fig. 2.2-2	Process descriptions indicate the addition of nitrogen and ammonia to the systems but do not mention whether NOx will be generated in significant quantities. The EIS should discuss the impact of introduction of nitrogen bearing compounds.	D0027-14
S.5.16	The cumulative radiological exposure as compared to the DOE limit is discussed but there is no mention of exposure compared to 40 CFR 61 and 40 CFR 190 limits. The EIS should discuss compliance with EPA limits on radiological exposure.	D0027-15
3.1.3.2	USEC does not have a Title V Permit. Sentence should be revised to so indicate.	D0027-16
3.1.9, 5.3.2	USEC does not manage the DOE DUF_6 cylinders and therefore does not handle waste generated from those processes. Delete these references.	D0027-17
5.2.1.4.1	The EIS indicates water is used during construction and that wastewater will be treated at the wastewater treatment plant. The wastewater treatment plant is not shown in process schematics. The EIS should be specific on where the wastewater will be treated and indicate on process drawings.	D0027-18
Table 5.2-15	This Table mentions 24 hour concentrations of HF associated with operations of the facility. The KDEP standard is base on a 12-hour concentration. The EIS should discuss compliance during normal operation and during accident conditions with the KDEP 12-hour limit.	D0027-19
Table 5.2-19 and Table 5.6-3	The amount of fuel and natural gas listed in these tables are not included in the general process discussions of air emissions and permitting. The EIS should discuss this issue.	D0027-20
Table 6-1	This Table indicates UDS will prepare an Annual Hazardous Chemical Inventory report each year. Chemical threshold quantities are derived from the aggregate of all residents on the DOE Reservation. Currently DOE provides USEC a monthly chemical inventory list of materials managed by various DOE sub-contractors on site. USEC then compiles the list to determine if a threshold quantity has been exceeded. The EIS method should address the current practices and how compliance will be demonstrated for the site.	D0027-21
	This Table indicates the DUF_6 conversion plant will not discharge process wastewater and therefore will not need a NPDES permit. USEC experience has been that a wet scrubber, water-cooled heat exchangers and water spray cooling will have a process waste stream. The EIS should address how these waste streams are to be treated or indicate a discharge permit will be required.	D0027-22

2/2/04 VJS

Document D0028

LOC INC
Oak Ridge Reservation
Local Oversight Committee

February 2, 2004

Gary Hartman
U.S. Department of Energy
Oak Ridge Operations Office
P.O. Box 2001
Oak Ridge, TN 37831

Subject: Draft Environmental Impact Statements (DEIS) for the construction and Operation of Depleted Uranium Hexafluoride (DUF6) Conversion Facilities at the Paducah, KY and Portsmouth, OH sites (DOE/EIS-0359 and -0360)

Dear Mr. Hartman:

The Citizens' Advisory Panel (CAP) of the Oak Ridge Reservation Local Oversight Committee, Inc. (LOC) concurs with the preferred alternatives presented for the two DEISs. D0028-1

The CAP's special concern is the removal of the DUF6 cylinders from East Tennessee Technology Park (ETTP). We are pleased that this action is to be completed by 2008 prior to the deadline imposed by the Tennessee Department of Conservation and Environment Commissioner's order and so that the accelerated cleanup of ETTP can be accomplished in a timely manner. D0028-2

The cumulative impact portion of the Portsmouth DEIS should be updated to reflect the decision to site the centrifuge plant at Site B. D0028-3

We are pleased to have the opportunity to comment on these documents. If you have any questions, feel free to contact the LOC office at 483-1333.

Sincerely,

Norman A. Mulvenon
Chair, LOC Citizens' Advisory Panel

cc: LOC Register
LOC Board
LOC CAP
Steve McCracken, Assistant Manager for EM, DOE ORO
William Murphie, Manager, Portsmouth Paducah Project Office
John Owsley, Director, TDEC DOE-O
Pat Halsey, FFA Coordinator, DOE ORO
Amy Fitzgerald, City of Oak Ridge
David Mosby, Chair, ORSSAB

Document D0029

From: Vina Colley [vcolley@earthlink.net]
Sent: Tuesday, February 03, 2004 4:50 PM
To: DUF6_Ports
Subject: Testimony for the record..

Thank you for the opportunity to testify about the DU conversion plant. *Facility Accidents Involving Radiation or Chemical Release* on page 2-29 (2.4.2.2.2) DOE/EIS-0360 Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility dated December 2003. D0029-1

Under the alternative, it is possible that human-error could cause an accidental release of more deadly radiation and toxic chemicals into the environment affecting both the workers and the general public. For the Piketon,OakRidge and any other plant to ship these cylinders off-site and continue moving these cylinders around, whether by train or by truck, not only provides the terrorists with a moving target as well as increases the threat of nuclear terrorism. We shouldn't ship these potential "dirty bombs" of poisonous hazards waste cylinders because there will be unnecessary risks of exposure to the workers and the public. . D0029-2

Many of these cylinders contain plutonium (PU) and Neptunium NEP in them any many other Transuranic elements. Past history has also revealed shoddy record keeping at the Piketon plant. We find the records on these cylinders often disappear or the government simply fails to follow necessary safety precautions, which can cause even more serious problems once these depleted uranium (DU) cylinders become heated up. D0029-3

Furthermore, where will we put all the toxic waste? How many more people will ultimately be contaminated with PU and NEP and many other daughter products? Who will want to store such nuclear waste? And how much more waste from these potential "dirty bombs" will be left over, which further increases the threat of nuclear terrorism? The scope of this work is to push forward into unknown territory. Performance at the Piketon plant over the past 50 years has been based solely on government secrecy and lies. Recent statements being made by government contractors vying to build two new plants at Piketon is also base on similar lies that we've all heard before.

Telling local schools teachers, media and all local business owners that these new jobs will be safe and better than before is simply another LIE! The truth is we the people of the United States are engaged in a war on terrorism. The government has even lied to us about why we were going to war against Iraq (there were no weapons of mass destruction in Iraq). We are Americans and we have the right to know the truth about health hazards and other potential threats that the promise of these new jobs will bring with them into Piketon, into each of our communities, even into our very own backyards! D0029-4

Many of you know what serious harm will come from the DU conversion plant or from the Centrifuge, but some of you don't. If the Piketon community will still be operating a nuclear waste storage facility then everyone in the Piketon community should be told the truth that the Portsmouth Gaseous Diffusion will be a conversion waste storage plant. In the end you can expect to find little work, but more toxic, hazardous chemicals coming through our area and contaminating our community. We might suggest that as a sign of good faith that the government buys up the homes leading into the plant if they still intend to build these two hazards plants. D0029-5

It is high time for the DOD/DOE to abandon their Nazi mentality and remember their crimes against humanity. Thousand of American workers that you lied too became made sick as if Piketon was a Nazi concentration camp and we were your holocaust victims. The ghosts of thousands of former plant workers and eventually the ghosts of those who are now dying after deadly exposures from the Portsmouth Gaseous Diffusion plant will certainly come back to haunt you in the end. Not only here, but at other DOE/DOD site across this country! If you don't believe in God and the Day of Judgment, the Devil and hell, you and your families will have an eternity to think about your crimes against humanity. D0029-6

Cancer and heart problems around the Portsmouth Gaseous Diffusion plant are extremely high. Thousands of community residents have not been given any compensation for their cancers or other radiation-induced illnesses, either. Like the Nazis, you shall stand before God Almighty with their blood on your hands too.

Additional threats that the Piketon plant poses include several earthquake tremors (at least 5-7 on the scale) that we have had. We live in a flood plain zone. Tornados have also been known to touch down within a couple miles from the Portsmouth Gaseous Diffusion plant, too. Any of these so-called "acts of God" can certainly cause the Piketon nuclear facility to explode like Chernobyl. D0029-7

Two aquifers beneath the Piketon nuclear plant supplies our groundwater. One is shallow and the other aquifer is D0029-8

deep. DOE reports the shallow aquifer is contaminated, with (TCE)***trichloroethylene*** being the main contaminant of concern. The other aquifer is not of sufficient volume to be a source of drinking water. DOE maintains that no groundwater has migrated offsite, which we know to be a bare face lie. Arguments similar to these were used at the Pantex plant in Texas, where a shallow"perched" aquifer was supposedly confined, but has since been found to be leaking into the much larger Ogallala aquifer, despite DOE's earlier false assurances to the American public that all is safe. (TCE) trichoroeyhylene is contaminating the Ogallala Aquifer, which was outlined in the Radioactive Waste Management Associate groundwater report February 2002 on groundwater movement of the Portsmouth Gaseous Diffusion Plant. D0029-8 (cont.)

Below is a few reason that the Portsmouth Gaseous diffusion should be investigated before we bring more nuclear jobs to Piketon, Ohio. DOE/DOD haven't even address the off site problems from the past 50 years of production yet. D0029-9

The report of Groundwater Movement at the Portsmouth Gaseous Diffusion Plant by Marilynn dela Merced, Beat Hintermann and Marvin Resnikoff for the Uranium Enrichment Project and PRESS February 2002 should be thoroughly investigated before anyone should begin pushing the idea of creating more dirty jobs for the area..We will need to have independent scientists looking at the problems here first in order to hold someone within the U.S. government, within the Piketon nuclear plant accountable before beginning construction of the Depleted Uranium Hexafluoride Conversion Facility at Piketon, Ohio. D0029-10
We will also need to look much closer at the on site and off site contamination problems from the past 50 years of productions at the Piketon plant, too.

POTENTIAL COMMUNITY HEALTH THREAT POSED BY RADIATION IN CREEK FLOWING FROM PORTSMOUTH GASEOUS DIFFUSION PLANT IN PIKETON, OH. Dr. Paschenko has collected over 100 samples of water and soil around the plant, which will be analyzed in SSGR's laboratory in the coming months. However, in the first stage of analysis, Paschenko discovered levels of beta activity in samples of foam that were at least 100 times higher than normal background radiation levels. This foam was collected in a creek that flows from the plant grounds along border of the community residents. We need more time to bring others into Piketon for additional independent studies in order to hold DOE and other government officials accountable. D0029-11

Members of (PRESS) Portsmouth/ Piketon Residents for Environmental Safety and Security have asked the Ohio Environmental Protection Agency (OEPA) and the company managing the Portsmouth Gaseous Diffusion plant many times to please post warning signs along the creeks that surround the Portsmouth Gaseous Diffusion plant located in Piketon, Ohio. Still to this day THERE ARE NO SIGNS! This alone is hard core evidence that clearly proves the OEPA blatant disregard for the value of human life and raises some serious concerns about their role as protectors of environmental safety. D0029-12

(PRESS) Portsmouth/Piketon Residents for Environmental Safety and Security have only used documents from the Portsmouth Gaseous Diffusion plants to publicly present every story about the problems at the Piketon, Ohio plant. Stories about the "Plutonium" which the company managing the Portsmouth Gaseous Diffusion plant consistently denies having on site, for example. Workers nationally at the DOE/DOD plants now have a compensation bill called EEOICPA. This bill is paying some cancer victims but not all cancer victims nor all illness. PRESS is asking for an audit and investigation of the Portsmouth Gaseous Diffusion Plant as well. If the recent findings of Sergie Paschenko, a well known Russia physicist, are validated community concern will quickly escalate. D0029-13
Once again this will provide additional hard-core evidence of the OEPA blatant disregard for the value of human life. Residents of the local community have not been informed that they have problems.
Furthermore, the site alert/alarms have not been sounded at the time of negative release of gases. On March 7, 1978 a 14 ton cylinder filled with liquid uranium hexafluoride was being hauled to a cooling site by straddle and lift cylinders. The cylinder lost over 21,00.00 lbs of uranium hexafluoride passing through a hole in the cylinder. The alarm should have sounded, but didn't! Again in August of 1980 the Cleveland Plain Dealer reported that: 2,500 pounds of uranium was lost down the west drainage ditch, which also collected "essentially all the uranium that precipitated from the plume". About 1,500 pounds of uranium escaped from the ditch into the nearby Scioto River.
The Cleveland Plain Dealer reported that at least 43 workers were known to have become contaminated. Goodyear officials speculated that most of the URANIUM HEX-A-FLUORIDE reacted with moisture in the air (FORMING HYDROGEN FLUORIDE - A POTENT ACID CAPABLE OF EATING THROUGH GLASS AND URANYL FLUORIDE) another uranium compound. In 1992 while moving and painting the Deplete Uranium cylinders a valve was D0029-14
broken. This cause more material to become airborne. Again there were NO ALARMS for community awareness.

Below are a few reports of the many off-site problems. The Portsmouth Gaseous Diffusion in Piketon, Ohio scored 54.6 for the NPL superfund. A minimum score of 28.5 score suggests it should have be placed on the Superfund. Portsmouth has never been placed on the NPL listing. D0029-15

Columbus Dispatch Feb 7, 1993
Michael B. Lafferty reported that the fish in streams surrounding the Portsmouth Gaseous Diffusion Plant in Piketon, Ohio have elevated levels of radiation according to an Ohio Environmental Protection Agency (EPA). The report was written in April of 1992 but was not released until the Dispatch asked for a copy for his story in 1993. The report stated the most comprehensive state evaluation of radiation and chemical pollution surround the nuclear fuels plant. Further example suggests the Plant's uranium hexafluoride is concentrated into a more radioactive form for use as fuel in reactors like those on submarines. Bomb grade uranium was process from 1954 until at least 1991or 92.

The dispatch further reported that tissue from fish around the plant have elevated levels of radiation. Stream sediments also displayed radiation levels FIVE TIMES above the acceptable levels. There were also increased levels of arsenic, cadmium, chromium and mercury.

At one measured site on Little Beaver Creek in Southern Ohio. The total uranium levels were twice the level at which normally corrective action are required.

In total, the test samples were collected at 18 sites in the Scioto River , Big Beaver and Little Beaver Creeks, Big Run and at the water course referred to in the report as Nursing home road. D0029-16

The EPA representative said in the 90's that there was a strong indication that radioactive and chemical pollutants would cause future problems. Biologists have been concerned about the uranium and heavy metals found in Little Beaver Creek. Most of the year, particularly during summer, wastewater from the plant supplies almost all flow into the streams.The EPA report also said they found radioactivity may be the results of the radioactive isotope potassium 40, which is considered an abnormally RADIOACTIVE substance that accumulates in bones like Strontium-90. Radiation could be the result of widespread technetium 99 contamination at the Portsmouth Plant, too. Bernie Counts speculated the heavy metals may be suppressing some insect populations as well.

Finally, the EPA report says heavy metals in the sediments were also at high concentration levels. The highly elevated concentrations of chromium, (about 72 parts per million) and also mercury (0.24 parts per million) were found where BiG Beaver Creek empties into the Scioto River and then into the OHIO RIVER, which is a primary source of drinking water for millions of unwitting Americans residing in cities further downstream, from Cincinnati all the way to New Orleans!

Vina Colley former worker and president of PRESS and National Advocate co-chair for National Nuclear Workers For Justice..

Document D0030

February 2, 2004

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Public Comment in the matter of:
Draft Depleted Uranium Hexafluoride (DUF-6) Conversion Facility EISs

Comment Period Ends:
February 2, 2004

Please include the following questions and comments as part of the permanent file.

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Questions and Comments:

1. Pages 2-19 & 20: A proposed enrichment facility in New Mexico is attempting to broker a deal giving DOE responsibility for conversion of their DUF-6; for services similiar to those DOE provides USEC. This DEIS (Paducah) bases its assumptions on a 25 year operational period with a maximum 20,000 tons/yr (DUF-6) throughput. Should USEC and the New Mexico company divide future conversion needs between Paducah and Portsmouth, many of the already marginal assumptions, regarding human health and the environment, would become invalid either in terms of time, throughput, or both. Rumors persist that plans are already underway to increase the capacity of the Paducah conversion plant beyond the four parallel conversion lines. D0030-1

2. Page 4-11 (last para.): Many hypersensitive individuals were "created" due to an initiating dose that changed their normal immune response. D0030-2

3. Page 4-11 (last para.): A pregnant woman exposed during an "accidental" release may show no adverse response herself; inatead passing the toxic effect to the fetus. D0030-3

4. Page F9 (F.1.2): When addressing the chemical impacts of hydrogen fluoride, on human health, one important aspect, not considered in this DEIS (Paducah), is the propensity of inhaled HF to damage the heart and arteries once absorbed into the blood stream. For instance, the latent effects, for the general public, from the action of HF (fluoride) on the heart and vascular system could be considerable when calculating a dose of 0.02mg/kg-d (168 hours per week) over a 25 year period. Low doses of fluoride entering D0030-4

the body, over a long period of time, might also produce arthritic conditions from the calcifying action on joints.

Also unclear is whether total regionally-emitted "fluoride" was considered when determining potential dose to the general public. One might expect that the coal buring plants, identified in Table 3.1-2 (page 3-7), would be additional regional-sources of fluoride emissions as well as PGDP and the Honeywell plant in Metropolis, Illinois. Further, in this instance, an important consideration should be the extent and duration of past fluoride exposure, for general public, living within 10 miles of PGDP. It is also unclear as to whether the HF dose-rate of 0.02mg/kg-d applies to all of the general public residing within the targeted 50 mile radius or to public in an unidentified radius. One would expect the impact to be greater the closer one lives to the plant. D0030-4 (cont.)

Low doses of fluoride entering the body over a long period of time might also produce generational effects.

5. Page 5-63: "Total maximum estimated concentrations for PM 2.5 would approach NAAQS and SAAQS..." What is the anticipated composition (metal, chemical, radiological) of that PM 2.5 (microns), expected to be released to air during normal plant operations? The character of the respirably sized particle is important when considering its potential to adversely impact human health. For instance, respirably sized particles of U_3O_8 could represent a significant pathway for radiation exposure if inhaled into the lungs or absorbed into the gastrointestional tract, through contaminated foodstuff. The health risk for PM 2.5 does not alone lie in the airborne levels but also in the duration that particle remains in the body and the effect it has on cell structure and activity. Also, due to the size of the particle and the anticipated high-release levels this DEIS (Paducah) should have assessed a terrain dispersion model that included cumulative levels of particulates and their re-entrainment. D0030-5

6. Page B-7 (B.5): "...potential impacts of any TRU and Tc contamination would be the greatest in cases involving accidents during...handling of the cylinders and during the management of wastes associated with the cleaning and disposition of empty cylinders." (B-9) "...doses...attributed to TRU and Tc-99 found in the heels...can be relative high compared to uranium doses." Page 2-36 (2.4.2.8) "Current USD plans are to leave the heels in the emptied cylinders...and either (1) crush the cylinders..." Page 2-14 (2.2.2.6) This section presents an option for compacting and sectioning emptied cylinders still containing heels.

The option to crush and section cylinders in the manner presented on page 2-36 provides no explanation as to whether protective measures were incorporated into that process ; that would protect workers from exposure to "free" TRU or grouted TRU. This DEIS (Paducah), in general, fails to consider worker health with respect to handling cylinders. D0030-6

Page B-6 (B.4) "...UDS is now planning to fill the emptied cylinders with the depleted U_3O_8 product..." We agree this would be the preferred option and suggest the heels be stabilized with grout prior to refilling. We do disagree however that the U_3O_8 is "product": it is waste. Also, if the crush and cut option is still valid, this DEIS needs to present a clearer

view as to how the TRU in the heels will be contained during processing. D0030-6 (cont.)

7. Page E-7 (E 3.1): Does the figure of 70% include all the aqueous hydrogen produced at both conversion plants? D0030-7

8. The nominal wall thickness for DUF-6 cylinders is 312 mils.. Ultrasonic measurements for the thickness of cylinders in storage at ETT and Paducah have shown that corrosive actions have reduced that thickness, in many instances,to less thanhalf. DOE guidance recommends that a minimum cylinder wall thickness of 250 mils is "required" for safe handling and transporting cylinders. Studies have determined 3mils per year would be a normal rate of corrosive reduction in cylinders. At that rate, cylinders over 25 years old would already have wall thicknesses below the"safe level" of 250 mils, thus presenting a hazard when handling and shipping. Further, previous inspections of cylinders stored on the ground have found that areas in contact with the ground experienced greater corrosion rates. Other cylinders have not been inspected to assess wall thickness due to the storage configuration. It is our opinion that this DEIS (Paducah) has not adequately considered the conditions of the cylinders and the associated risk(s). D0030-8

9. Page F-21 (F.3.1): In the past river transportation was explored as an economical option for transporting cylinders from ETT. This DEIS did not analyse the risks associated with that mode of transportation. D0030-9

10. Will the calcium fluoride produced at the conversion plant be a granular form or a fine powder? D0030-10

11. The Depleted UF-6 Final PEIS expresses Hydrogen Fluoride in terms of anhydrous while this DEIS (Paducah) expresses it as aqueous. Please explain the reason for this change. D0030-11

12. Perhaps we overlooked it, but we do not recall any information in this DEIS (Paducah) detailing annual use, storage, or transportation of anhydrous ammonia. It is apparent that anhydrous ammonia (page 2-12, 2.2.2.3) is an important component of the conversion process that will pose its own set of hazards.

    Page 5-117 (Table 5.6-2): 10,000 tons of nitrogen gas (N_2) will be consumed annually during the conversion facility operations" (Paducah). Page 2-12 (2.2.2.3): "Nitrogen...a purging gas and is released to the atmosphere...the clean off-gas stream." D0030-12

    Pages 5-59 through 61 (5.2.2.3.1): We are unsure as to whether all nitrogen referenced as an off-gas is a by-product of hydrogen generation from anhydrous ammonia. We are also unsure as to whether all 10,000 tons are expected to be released to air. Another uncertainity is whether this excess nitrogen, free for oxidation, was included in total NO_x emissions from conversion facility operations.

13. Page 5-65 (5.2.2.4.1): Water withdrawn from the Ohio River would approximate 57 million gallons per year. 4,000 gal/d would be released to surface water with the remainder of the withdrawn-water recirculated back D0030-13

into the process. Assuming this were true, there would be an enormous net water gain somewhere in the system or a lot of potentially contaminated water would be vented as steam from the cooling towers and other plant processes. This DEIS (Paducah) needs to better account for water usage/ disposal. D0030-13 (cont.)

14. Page 5-69 (line 11): incorectly references Table 5.2-18 for Table 5.2-17 D0030-14

15. Page 3-15 (3.1.5.1): This sets the current water use at "approximately 15 million gal/d." However, a January 9, 2004 report entitled Paducah Water Balance Analysis (PGDP,CAB-Water Task Force) sets the total average water flow in at 11.9 million gal/d.

    Page 3-15 (3.1.5.1): This states that"during most of the year, most of the flow in both streams (Bayou & Little Bayou) is derived from plant effluents" and that the average discharge to the Ohio River...is about 4.1 million gal/d. However, the Paducah Water Balance Analysis puts the water flow out (accounted for) at 10.54 million gal/d. D0030-15

    In this draft DEIS (Paducah) the difference in the ratio of water in to water out is significant. Since the Water Balance-water flow in figure is reflective of the unaccounted for (DEIS) water out this DEIS needs to reconcile water in/water out with water use/ water disposal.

16. The ATSDR Public Health Assessment for Paducah Gaseous Diffusion Plant... May 2002 (pg. 52), identifies thallium as "the contaminant of concern" found in surface water at PGDP. While this DEIS (Paducah) discusses PCB and Uranium as surface water/sediment contaminants, it fails to consider thallium; a significant pollutant, injurious to human health. D0030-16

17. The combined effect of pollutants is frequently understated in documents such as this (DEIS). One of the reasons often provided is the lack of studies regarding additive, synergistic, or cummulative actions. However, the synergistic interaction of airborne hydrogen fluoride with sulfur dioxide has been well researched. This DEIS (Paducah) anticipates the release of HF to air from the DUF-6 conversion facility (page 5-61, Table 5.2-15) and describes fairly high sulfur dioxide emission levels from major sources around the Paducah site (page 3-7, Table 3.1-2).This DEIS has not considered the greater adverse-effects expected from the synergistic action of these two pollutants. D0030-17

18. Page 5-69 (re: on site disposal): The permitted life of the on-site C-746-U landfill is less that the expected 25 years of conversion operations. The Acclerated Clean-up Plan waste volumes for PGDP also exceed the permitted capacity of that landfill. The C-746-U landfill is owned by DOE. If Uranium Disposition Services, LLC is a private/stand alone company, ultimately responsible for products produced as well as waste generated, disposal in the C-746-U landfill should be fee based, identical to any similiar landfill. THE C_746_U LANDFILL IS A VERY CONTENUOUS COMMUNITY ISSUE. D0030-18

19. Past "self regulation" of PGDP, by DOE, has ultimately created an extreme example of a Superfund site that will remain a toxic legacy for generations to come. Uranium Disposition Services, LLC (Paducah) should be the owner/ operator of the conversion facility;responsible for all air, water,and land permits. D0030-19

Thank you